SEQUENCE LISTING

<110> Williams, John G. K.
LI-COR, Inc.

<120> Composition and Method for Nucleic Acid Sequencing

<130> 020031-003110US

<140> US 10/821,689
<141> 2004-04-08

<150> US 60/461,522
<151> 2003-04-08

<150> US 60/462,988
<151> 2003-04-14

<160> 23

<170> PatentIn Ver. 2.1

<210> 1
<211> 89
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:synthetic target nucleic acid, single molecule in microtiter plate well

<400> 1
tatgaaaatt ttccggttta aggcgtttcc gttcttcttc gtcataactt aatgttttta 60
tttaaaatac cctctgaaaa gaaaggaaa 89

<210> 2
<211> 89
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:synthetic target nucleic acid, single molecule in microtiter plate well

<400> 2
cgacaggtgc tgaaagcgag gctttttggc ctctgtcgtt tcctttctct gtttttgtcc 60
gtggaatgaa caatggaagt caacaaaaa 89

<210> 3
<211> 89
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:synthetic target nucleic acid, single molecule in microtiter plate well

<400> 3
gcagctggct gacattttcg gtgcgagtat ccgtaccatt cagaactggc aggaacaggg 60
aatgcccgtt ctgcgaggcg gtggcaagg 89

<210> 4
<211> 89
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:synthetic target
nucleic acid, single molecule in microtiter plate well

<400> 4
gtaatgaggt gctttatgac tctgccgccg tcataaaatg gtatgccgaa agggatgctg 60
aaattgagaa cgaaaagctg cgccgggag 89

<210> 5
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:synthetic amino
acid anchor sequence

<220>
<221> MOD_RES
<222> (11)
<223> Xaa = p-acetyl-L-phenylalanine (pa-Phe)

<400> 5
Leu Leu Ser Lys Lys Arg Ser Leu Cys Cys Xaa Cys Thr Val Ile Val
1 5 10 15

Tyr Val Thr Asp Thr
20

<210> 6
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:first
double-stranded oligonucleotide adaptor

<220>
<221> modified_base
<222> (1)
<223> n = biotinylated c

<400> 6
ngccacatta cacttcctaa cacgt 25

<210> 7
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:complement of
first double-stranded oligonucleotide adaptor

<400> 7
cgtgttagga agtgtaatgt ggcg 24

<210> 8
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:second
double-stranded oligonucleotide adaptor

<400> 8
cagtaggtag tcaaggctag agtct 25

<210> 9
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:complement of
second double-stranded oligonucleotide adaptor

<400> 9
gactctagcc ttgactacct actg 24

<210> 10
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:ligated DNA
product

<220>
<221> modified_base
<222> (1)
<223> n = biotinylated c

<220>
<221> modified_base
<222> (26)..(30)
<223> n = g, a, c or t

<400> 10
ngccacatta cacttcctaa cacgtnnnnn 30

<210> 11
<211> 33
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:ligated DNA
product

<220>
<221> modified_base
<222> (1)..(5)
<223> n = g, a, c or t

<400> 11
nnnnnagact ctagccttga ctacctactg aaa 33

<210> 12
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:ligated DNA
product, unbiotinylated DNA strand eluted at
alkaline pH

<220>
<221> modified_base
<222> (1)..(5)
<223> n = g, a, c or t

<400> 12
nnnnnacgtg ttaggaagtg taatgtggcg 30

<210> 13
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:ligated DNA
product, unbiotinylated DNA strand eluted at
alkaline pH

<220>
<221> modified_base
<222> (1)
<223> n = 5' phosphorylated c

<220>
<221> modified_base
<222> (26)..(30)
<223> n = g, a, c or t

<400> 13
nagtaggtag tcaaggctag agtctnnnnn 30

<210> 14
<211> 59
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primed circular
template strand, eluted strands circularized

<220>
<221> modified_base
<222> (1)..(59)
<223> n = g, a, c or t

<400> 14
nnnnncgtgt taggaagtgt aatgtggcgc agtaggtagt caaggctaga gtctnnnnn 59

<210> 15
<211> 49
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:primer oligo
complementary to both adaptors

<400> 15
agactctagc cttgactacc tactgcgcca cattacactt cctaacacg 49

<210> 16
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:T7 DNA
polymerase gene forward amplification primer
encoding exonuclease mutations

<400> 16
atgatcgttt ctgccatcgc agctaac 27

<210> 17
<211> 16
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:T7 DNA
polymerase gene reverse amplification primer

<400> 17
tcagtggcaa atcgcc 16

<210> 18
<211> 75
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:synthetic
oligonucleotide encoding Strep-Tag II sequence
overlapping 5'-end N-terminus of amplified T7
polymerase gene with 2 exo- mutations

<220>
<221> CDS
<222> (1)..(75)
<223> Strep-Tag II peptide, spacer and T7 polymerase
N-terminus overlap with 2 exo- mutations

<400> 18
atg tcc aac tgg tcc cac ccg cag ttc gaa aaa ggt gga ggt tcc gct 48
Met Ser Asn Trp Ser His Pro Gln Phe Glu Lys Gly Gly Gly Ser Ala
1 5 10 15

atg atc gtt tct gcc atc gca gct aac 75
Met Ile Val Ser Ala Ile Ala Ala Asn
20 25

<210> 19
<211> 25
<212> PRT
<213> Artificial Sequence

<220>
<223> Strep-Tag II peptide, spacer and T7 polymerase
N-terminus overlap with 2 exo- mutations

<400> 19
Met Ser Asn Trp Ser His Pro Gln Phe Glu Lys Gly Gly Gly Ser Ala
1 5 10 15

Met Ile Val Ser Ala Ile Ala Ala Asn
20 25

<210> 20
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:overlapping PCR
synthetic oligonucleotide StrepTag forward primer

<400> 20
atgtccaact ggtcccaccc 20

<210> 21
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:synthetic oligonucleotide sample primer derived from cystic fibrosis transmembrane conductance regulator gene

<400> 21
tactataaaa gaaattacca c 21

<210> 22
<211> 22
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:synthetic oligonucleotide sample template derived from cystic fibrosis transmembrane conductance regulator gene normal allele

<400> 22
gugguaauuu cuuuuauagu ag 22

<210> 23
<211> 22
<212> RNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:synthetic oligonucleotide sample template derived from cystic fibrosis transmembrane conductance regulator gene (delta)F508 deletion mutant

<400> 23
gugguaauuu cuuuuauagu aa 22